



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,008	12/07/2006	Akio Kuroda	KURODA 8	7314
1444 7590 03/30/2010 BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303				
EXAMINER				
KRUEER, KEVIN R				
ART UNIT		PAPER NUMBER		
1787				
MAIL DATE		DELIVERY MODE		
03/30/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/563,008

**Applicant(s)**

KURODA ET AL.

**Examiner**

KEVIN R. KRUEER

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/7/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CIS-100)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/2009 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 1 has been amended to state that the saturated polyester resin layer is "crystalline." While the original disclosure supports a saturated polyester resin layer that has been "crystallized," it is not clear that "crystallized" and "crystalline" are synonymous. Specifically, claim 2 states the crystallized layer has a degree of crystallization of 10-60%. However, "crystalline" is typically utilized to refer to polyesters with a degree of crystallization

higher than the minimum degree of crystallization required by claim 2. Thus, the disclosure of a "crystallized" polyester is insufficient to support a "crystalline" polyester.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is meant by the term "crystalline." Specifically, it is not clear to what degree of crystallization (or other physical/chemical characteristic) the term refers.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-195618A (herein referred to as Toyo) in view of Agrawal et al (US 4,318,882), as evidenced by JP 05-269920 (herein referred to as Nippon).

Toyo teaches a laminate comprising a metal substrate layer, a layer comprising 75-99wt% polyester and 25-1wt% ionomer (layer B), and an outer layer (layer A) comprising a saturated polyester resin layer derived from dicarboxylic acid consisting of

99-85wt% terephthalic acid and 1-15mol% isophthalic acid and a dihydroxy compound (abstract). The product is made into a squeeze can (title). The thickness of layer A to layer B is 2:1-1:9 (0042). The laminate is made by extruding layers A and B onto a metal substrate such that layer B contacts the metal (0044). In such an arrangement, neither layer is oriented or crystallized.

Toyo does not teach the exterior surface of layer A should be treated to increase its crystallinity. However, Agrawal teaches the amount of crystallinity achievable in a heat-treated polyester depends primarily on the heat treatment temperature and time (see US 4,318,882, col 9, lines 21+). The time and temperature can be controlled to optimize the thickness of the highly crystallized layer and the degree of crystallinity (the longer the time before quenching, the higher the temperature of the polyester in the thickness of said film and, thus, the higher the crystallinity). Said increase in crystallinity improves the properties of the polyester (col 9, lines 17+) and is known in the art to result in improved corrosion resistance of the metal substrate (see JP'920; see 0016). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat treat the polyester film taught in Toyo in order to form a layer (X) of higher crystallinity on the surface of layer A. The motivation for doing so would have been to improve the properties, including the corrosion resistance, of the laminate. Furthermore, it would have been obvious to the skilled artisan to control the temperature and time of the heat treatment in order to optimize the degree of crystallinity and thickness of the highly crystalline layer. The motivation for doing so

would have been to optimize the physical properties of the laminate-including formability, cost efficiency and corrosion resistance.

***Response to Arguments***

Applicant's arguments with respect to claims 1-4 have been fully considered but are not persuasive.

Applicant argues the combination of Toyo and Nippon fails to disclose or suggest that polyester resin layer (A) is "substantially unoriented and uncrystallized before the heat treatment." The examiner respectfully disagrees as the polyester films of Toyo are not oriented (0044). Applicant further argues the claims recite specific temperature and time of the heat treatment which is not disclosed or suggested in the cited art. Said arguments are noted but are not persuasive because applicant has failed to demonstrate that the newly claimed method limitations inherently result in a materially different product. Specifically, counsel argues that said method limitations are not taught or suggested but fails to explain how the method limitations inherently result in a materially different product. The record is also void of any suggestion of the differences between the product of the prior art and the claimed invention. Thus, applicant's arguments are not persuasive.

Applicant further argues that Nippon teaches biaxially oriented polyesters and that the crystallization taught in Nippon is orientation crystal which results from quenching the oriented polyester layer. Said argument is moot in view of the new grounds of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUEER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Krueer/  
Primary Examiner, Art Unit 1794